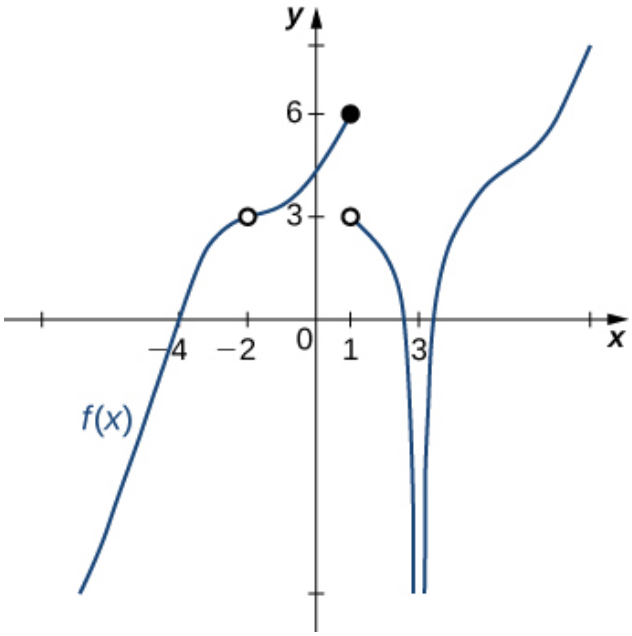
1. For the graph below, evaluate the limit: $\lim_{x \to 3} f(x)$.



A. $-\infty$

B. -2

C. 1

D. The limit does not exist

E. None of the above

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2. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 2^-} \frac{1}{(x+2)^3} + 9$$

A. $f(2)$

B. ∞

C. $-\infty$

D. The limit does not exist

E. None of the above

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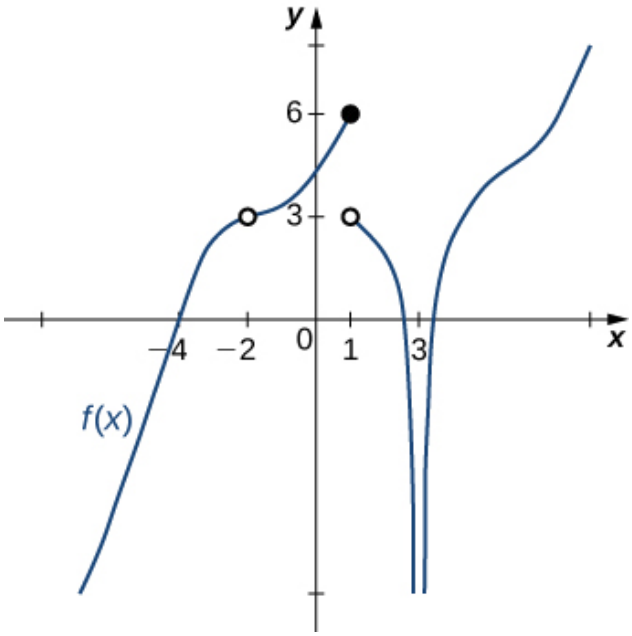
3. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. 1

B. 3

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.

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4. Based on the information below, which of the following statements is always true?

$$f(x) \text{ approaches } 11.29 \text{ as } x \text{ approaches } \infty.$$

A. $f(x)$ is close to or exactly 11.29 when x is large enough.

B. x is undefined when $f(x)$ is large enough.

C. $f(x)$ is close to or exactly ∞ when x is large enough.

D. $f(x)$ is undefined when x is large enough.

E. None of the above are always true.

5. To estimate the one-sided limit of the function below as x approaches 9 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{9}{x} - 1}{x - 9}$$

A. $\{8.9000, 8.9900, 9.0100, 9.1000\}$

B. $\{8.9000, 8.9900, 8.9990, 8.9999\}$

C. $\{9.0000, 9.1000, 9.0100, 9.0010\}$

D. $\{9.1000, 9.0100, 9.0010, 9.0001\}$

E. $\{9.0000, 8.9000, 8.9900, 8.9990\}$

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6. Evaluate the limit below, if possible.

$$\lim_{x \to 3} \frac{\sqrt{7x - 5} - 4}{8x - 24}$$

A. 0.125

B. ∞

C. 0.331

D. 0.016

E. None of the above

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7. Evaluate the limit below, if possible.

$$\lim_{x \to 7} \frac{\sqrt{6x - 26} - 4}{9x - 63}$$

A. 0.125

B. 0.272

C. ∞

D. 0.014

E. None of the above

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8. Based on the information below, which of the following statements is always true?

$$f(x) \text{ approaches } 6.935 \text{ as } x \text{ approaches } \infty.$$

A. $f(x)$ is close to or exactly 6.935 when x is large enough.

B. $f(x)$ is close to or exactly ∞ when x is large enough.

C. $f(x)$ is undefined when x is large enough.

D. x is undefined when $f(x)$ is large enough.

E. None of the above are always true.

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9. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to -6^-} \frac{-5}{(x-6)^8} + 2$$

A. $f(-6)$

B. $-\infty$

C. ∞

D. The limit does not exist

E. None of the above

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10. To estimate the one-sided limit of the function below as x approaches 6 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{6}{x} - 1}{x - 6}$$

A. $\{6.0000, 6.1000, 6.0100, 6.0010\}$

B. $\{5.9000, 5.9900, 5.9990, 5.9999\}$

C. $\{6.1000, 6.0100, 6.0010, 6.0001\}$

D. $\{5.9000, 5.9900, 6.0100, 6.1000\}$

E. $\{6.0000, 5.9000, 5.9900, 5.9990\}$
